

**CLAIMS**

- 5 1. A chimeric molecule comprising a GLURP moiety consisting of a polypeptide fragment of at least 50 amino acids from the GLURP<sub>25-514</sub> fragment of SEQ ID No:1, and a MSP3 moiety consisting of a polypeptide fragment of at least 50 amino acids from the MSP3<sub>212-380</sub> fragment of SEQ ID No:2, or a variant thereof in which 1 to 15 amino acids in any or both of said moieties have been deleted, added or changed by conservative substitution, wherein said chimeric molecule  
10 raises antibodies against both the polypeptides of SEQ ID No: 1 and SEQ ID No: 2, in mice immunized with it.
2. The chimeric molecule according to Claim 1, wherein said chimeric molecule is more immunogenic than a mixture of the polypeptides of SEQ ID No: 1 and SEQ ID No: 2.
- 15 3. The chimeric molecule according to claim 1 or 2, which raises in mice immunized with it higher levels of anti-MSP3 antibodies than either the MSP3<sub>212-380</sub> fragment of sequence SEQ ID No:2, or a mixture of both the GLURP<sub>25-514</sub> fragment of SEQ ID No:1 and the MSP3<sub>212-380</sub> fragment of sequence SEQ ID No:2.
- 20 4. The chimeric molecule according to claim 3, which further raises in mice immunized with it higher or equal levels of anti-GLURP antibodies than either the GLURP<sub>25-514</sub> fragment of SEQ ID No:1, or a mixture of both the GLURP<sub>25-514</sub> fragment of SEQ ID No:1 and the MSP3<sub>212-380</sub> fragment of sequence SEQ ID No:2.
- 25 5. The chimeric molecule according to any of claims 1 to 4, which raises in mammals immunized with it, IgG antibodies that can inhibit parasite growth *in vitro* in cooperation with human monocytes.

6. The chimeric molecule according to any of claims 1 to 5, which is a synthetic peptide.
7. A conjugate comprising a chimeric molecule of any of claims 1 to 6, which is bound to a support.
- 5 8. The conjugate of claim 7, wherein the support is viral particles, or nitrocellulose or polystyrene beads, or a biodegradable polymer such as lipophosphoglycans or poly-L lactic acid.
9. An immunogenic composition comprising as an immunogen a chimeric molecule according to claims 1 to 6, or a conjugate of claim 7 or 8, or a mixture of GLURP and MSP3 antigens.
- 10 10. A vaccine against malaria comprising as an immunogen a chimeric molecule according to claims 1 to 6, or a conjugate of claim 7 or 8, or a mixture of GLURP and MSP3 antigens, in association with a suitable pharmaceutical vehicle.
- 15 11. The immunogenic composition of claim 9 or the vaccine of claim 10, further comprising at least one antigen of *Plasmodium falciparum* selected amongst LSA-1, LSA-3, LSA-5, SALSA, STARP, TRAP, PfEXP1, CS, MSP1, MSP2, MSP4, MSP5, AMA-1, and SERP.
- 20 12. The immunogenic composition or the vaccine according to any of claims 9 to 11, which is formulated for intradermal or intramuscular injection.
13. The immunogenic composition or vaccine of claim 12, comprising from 1 to 100  $\mu\text{g}$  of immunogen per injection dose, preferably from 2 to 50  $\mu\text{g}$ .

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14. The immunogenic composition or vaccine of any of claims 9 to 13, further comprising Montanide and/or Alum and/or SBAS2 as an adjuvant.
- 5 15. Use of a chimeric molecule according to any of claims 1 to 6, or of a mixture of GLURP and MSP3 antigens, for the preparation of a vaccine composition against malaria.
16. Use of purified and/or recombinant anti-MSP3 and anti-GLURP antibodies, for the preparation of a medicament against malaria.
- 10 17. A medicament for passive immunotherapy of malaria, comprising purified and/or recombinant antibodies against MSP3 and GLURP.

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